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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,808	10/06/2004	James C. Kleewein	SVL920040039US1	5807
45727	7590	08/24/2006	EXAMINER	
LACASSE & ASSOCIATES, LLC 1725 DUKE STREET, SUITE 650 ALEXANDRIA, VA 22314			MORRISON, JAY A	
			ART UNIT	PAPER NUMBER
			2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,808	<b>Applicant(s)</b> KLEWEIN ET AL.	
	<b>Examiner</b> Jay A. Morrison	<b>Art Unit</b> 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/6/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. Claims 1-25 are pending.

#### ***Claim Objections***

2. Claims 1 and 23 are objected to because of the following informalities:
  - a. As per claim 1, line 2: "local area network" should be "a local area network".
  - b. As per claim 1, line 2: "wide area network" should be "a wide area network".
  - c. As per claim 23, line 2: "have to redirected" should be "have to be redirected".

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 1, 6, 13-14, 16, 19, 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said modification" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said network" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the old RID" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the old RID" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "said network" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "said Redirection Hash Table" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the correct Version Hash Table entry" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "favors" in line 1. This limitation is vague and not descriptive of exactly what "favors" means or entails.

Claim 25 recites the limitation "said modification" in line 7. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims do not recite a practical application

Art Unit: 2168

by producing a physical transformation or producing a useful, concrete, and tangible result. To perform a physical transformation, the claimed invention must transform an article or physical object into a different state or thing. Transformation of data is not a physical transformation. A useful, concrete, and tangible result must be either specifically recited in the claim or flow inherently therefrom. To be useful the claimed invention must establish a specific, substantial, and credible utility. To be concrete the claimed invention must be able to produce the same results given the same initial starting conditions. To be tangible the claimed invention must produce a practical application or real world result. In this case the claims fail to perform a physical transformation because the claims are directed to operating on data. The claims are useful and concrete, but they fail to produce a tangible result because no results are written to non-volatile media or, for example, reported to a user.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2168

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-7,9-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesh et al. ('Ganesh' hereinafter) (Patent Number 6,957,236 B1) in view of Odom et al. ('Odom' hereinafter) (Patent Number 6,516,320 B1).

As per claim 1, Ganesh teaches

A method for versioning in a storage architecture that manages node ranges, said method comprising: (see abstract)

a. receiving a node modification request from a database system; (transaction to modify, column 8, lines 26-30)

b. copying, to a storage, a node range to which said modification is to be made; (copy loaded, column 4, lines 61-65)

c. labeling said copied node range with an identifier; and wherein said labeled node range is locatable via said identifier. (version information, column 4, lines 41-54)

Ganesh does not explicitly indicate "and a hash on said node range."

However, Odom discloses "and a hash on said node range" (dynamic hash includes variable number of entries, column 4, lines 45-64).

Art Unit: 2168

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of “and a hash on said node range” would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claim 2, Ganesh teaches  
said identifier is any of the following: a timestamp or a LSN. (column 4, lines 41-54)

As per claim 3, Ganesh teaches  
said storage is a transient storage. (column 4, lines 61-65)

As per claim 4, Ganesh teaches  
said node modification request is any of the following: a node insertion request, a node update request, or a node deletion request. (column 8, lines 26-30)

As per claim 5, Ganesh teaches  
wherein said method is implemented across networks. (column 12, lines 2-13)

As per claim 6, Ganesh teaches

said network is any of the following: local area network, wide area network, or the Internet. (column 12, lines 2-13)

As per claim 7,

Ganesh does not explicitly indicate "said node ranges are associated with hierarchical node data that is derived from any of: a structured document, a computer network, or a directory file system."

However, Odom discloses "said node ranges are associated with hierarchical node data that is derived from any of: a structured document, a computer network, or a directory file system" (column 8, lines 57-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "said node ranges are associated with hierarchical node data that is derived from any of: a structured document, a computer network, or a directory file system" would have given those skilled in the art the tools to improve the invention by allowing many different structures to be used. This gives the user the advantage of being able to utilize the method on a variety of structures.

As per claim 9, Ganesh teaches

A method for versioning in a storage architecture that manages node ranges via a node id range index, said each node assigned a node id value and a set of nodes



Art Unit: 2168

forming a node range, each entry in said node id range index pointing to a node range and its range identifier, RID, said method comprising: (see abstract and background)

- a. receiving a node modification request for a range; (transaction to modify, column 8, lines 26-30)
- b. shadowing nodes ... based on RID; (copy loaded, column 4, lines 61-65)
- c. assigning a time identifier to copies of said range; wherein a node in said shadowed range is locatable via said time identifier and RIDs. (version information and time, column 4, lines 41-54)

Ganesh does not explicitly indicate "in said range to a Version Hash Table"

However, Odom discloses "in said range to a Version Hash Table" (dynamic hash includes variable number of entries, column 4, lines 45-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "in said range to a Version Hash Table" would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claim 10, Ganesh teaches

said time identifier is any of the following: timestamp or LSN. (column 4, lines 41-54)

As per claim 11, Ganesh teaches

new readers, after a modification, access current nodes through a new RID.

(column 4, line 61 through column 5, line 8)

As per claim 12, Ganesh teaches

previous readers access old nodes via the same RID ... to locate the shadowed copy. (column 4, line 61 through column 5, line 8)

Ganesh does not explicitly indicate "and hashing the same RID ... in said Version Hash Table."

However, Odom discloses "and hashing the same RID ... in said Version Hash Table" (column 4, lines 45-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "and hashing the same RID ... in said Version Hash Table" would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claim 13, Ganesh teaches

when modifications cause nodes in a range to be moved to a new RID, previous readers are redirected from the new RID to the old RID (column 4, line 61 through column 5, line 8).

Ganesh does not explicitly indicate "via a Redirection Hash Table."

Art Unit: 2168

However, Odom discloses "via a Redirection Hash Table" (column 4, lines 45-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "via a Redirection Hash Table" would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claim 14, Ganesh teaches

when modifications cause nodes in a range to be moved to a new RID, previous readers are redirected from the new RID to the old RID via an index that describes where old versions are (column 4, line 61 through column 5, line 8).

Ganesh does not explicitly indicate "in said Version Hash Table."

However, Odom discloses "in said Version Hash Table" (column 4, lines 45-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "in said Version Hash Table" would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claim 15, Ganesh teaches

said shadowed nodes are copied to a transient storage. (column 4, lines 61-65)

As per claims 16-17, Ganesh teaches

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 5-6 and are similarly rejected.

As per claim 18, Ganesh teaches

for range deletions, the range being deleted is moved to reserved RID  
.sub.RIDFF. (column 4, lines 54-60)

As per claim 19,

Ganesh does not explicitly indicate "a reader hashes said Redirection Hash Table on .sub.RIDFF to find the correct Version Hash Table entry."

However, Odom discloses "a reader hashes said Redirection Hash Table on .sub.RIDFF to find the correct Version Hash Table entry" (column 4, lines 45-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh and Odom because using the steps of "a reader hashes said Redirection Hash Table on .sub.RIDFF to find the correct Version Hash Table entry" would have given those skilled in the art the tools to improve the invention by increasing the speed of access. This gives the user the advantage of not having to wait long periods for results.

As per claims 20-21, Ganesh teaches

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 7-8 and are similarly rejected.

As per claim 22, Ganesh teaches

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 4 and is similarly rejected.

As per claim 23, Ganesh teaches

said method favors new readers over old readers as old readers have to redirected to shadowed storage. (column 8, lines 40-47)

As per claim 24, Ganesh teaches

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 9 and is similarly rejected.

As per claim 25, Ganesh teaches

This claim is rejected on grounds corresponding to the arguments given above for rejected claim 1 and is similarly rejected.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ganesh et al. ('Ganesh' hereinafter) (Patent Number 6,957,236 B1) in view of Odom et al.

('Odom' hereinafter) (Patent Number 6,516,320 B1) and further in view of Chang et al.  
('Chang' hereinafter) (Patent Number 6,584,459).

As per claim 8,

Ganesh does not explicitly indicate "said structured document is an XML document."

However, Chang discloses "said structured document is an XML document" (column 3, lines 48-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ganesh, Odom and Chang because using the steps of "said structured document is an XML document" would have given those skilled in the art the tools to improve the invention by improving interoperability. This gives the user the advantage of being able to use the format across platforms.

### ***Conclusion***

The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

Art Unit: 2168

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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